

## Abstract

A method and system are disclosed for mapping the topology of a network having interconnected nodes by identifying changes in the network and updating a stored network topology based on the changes. The nodal connections are represented by data tuples that store information such as a host identifier, a connector interface, and a port specification for each connection. A topology database stores an existing topology of a network. A topology converter accesses the topology database and converts the existing topology into a list of current tuples. A connection calculator calculates tuples to represent connections in the new topology. The topology converter receives the new tuples, identifies changes to the topology, and updates the topology database using the new tuples. The topology converter identifies duplicate tuples that appear in both the new tuples and the existing tuples and marks the duplicate tuples to reflect that no change has occurred to these connections. The topology converter attempts to resolve swapped port conditions and searches for new singly-heard and multi-heard host link tuples in the list of existing tuples. The topology converter also searches for new conflict link tuples in the existing tuples. The topology converter updates the topology database with the new topology.